January 2012

Nebraska Biological Evaluation Process

for the Federal-Aid Transportation Program

Photo by Tim Griffin, US Forest Service

PROGRAMMATIC BIOLOGICAL ASSESSMENT

for the

NEBRASKA BIOLOGICAL EVALUATION PROCESS

Prepared in support of the Programmatic Agreement between

Federal Highway Administration, Nebraska Division
Nebraska Department of Roads
US Fish and Wildlife Service
Nebraska Game and Parks Commission

5 January 2012

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1. INTRODUCTION

1.1 Background

Over the course of three years, the Biological Evaluation Process (Process) and its supporting documents and tools were prepared through over 30 interagency consultation meetings among Federal Highway Administration (FHWA), Nebraska Department of Roads (NDOR), US Fish and Wildlife Service (USFWS) and Nebraska Game and Parks Commission (NGPC). The tools that the agencies jointly developed are based on consideration of the life histories and ranges of the state and federally listed Endangered and Threatened species (E&T species) within Nebraska, federally designated critical habitat, documented observations of the protected species (Natural Heritage Database records), potential construction impacts from NDOR activities, and standardized reasonable conservation measures to be implemented into a construction project to avoid and minimize impacts.

The Process has been in use by the signatory agencies as a pilot program since June 2009 with 307 projects cleared through the streamlined process. The pilot program has allowed identification and correction of flaws, and allowed for issues to be addressed as they appeared. Advanced planning has allowed the incorporation of standardized conservation conditions into the project construction plans.

1.2 Brief Description of the Biological Evaluation Process

The Biological Evaluation Process is the evaluation method that uses the tools developed by the Programmatic Agreement (PA). Further discussion of the tools and how they are used is discussed in Chapter 3.

Implementation of the PA and associated tools will streamline the regulatory compliance process for state and federal coordination. The process will allow NDOR to conduct reviews and make determinations based on the Process for projects that have "No Effect" on listed species, that "May Affect, Not Likely to Adversely Affect", the species, or that "May Affect" the species. The agreement will eliminate the need to consult through FHWA with USFWS and NGPC, except in cases where a project may affect a listed species, may adversely modify federally designated critical habitat, or where conservation conditions cannot be implemented. Consultation with those agencies will not be required in cases where there are determinations of "No Effect" or "May Affect, Not Likely to Adversely Affect".

1.3 Purpose of the Programmatic Agreement

The purpose of the PA is to provide an efficient, consistent, streamlined approach to regulatory compliance for listed fish, wildlife, and plant resources in Nebraska. Implementing a standardized analysis, documentation and concurrence procedure will allow the construction and improvement of transportation facilities with either a nexus to the FHWA or, by agreement, state-funded NDOR projects.

1.4 Purpose of the Programmatic Biological Assessment

The Programmatic Biological Assessment (PBA) is the evaluation that documents the assessment of potential effects to the state and federally listed species within Nebraska, using the Process, associated tools, and the implementation of the PA.

1.5 Authority

Endangered, threatened, and proposed species are managed under the authority of the Federal Endangered Species Act (ESA) (PL 93-205, as amended) and the Nebraska Nongame and Endangered Species Conservation Act (NESCA) (Nebraska Revised Statute Section 37: 801-811). Under provisions of ESA, Federal agencies shall use their authorities to carry out programs for the conservation of listed species, and shall insure any action authorized, funded, or implemented by the agency is not likely to: (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of listed or proposed species; or (3) adversely modify proposed critical habitat (16 USC 1536). Under Section 7 of ESA federal agencies are required to consult with USFWS for actions which may affect listed species.

Under provisions of NESCA, State agencies shall use their authorities to carry out programs for the conservation of listed species, and shall insure any action authorized, funded, or implemented by the agency is not likely to: (1) adversely affect listed species; or (2) jeopardize the continued existence of listed or proposed species. *It is noted that all federally listed species in Nebraska are also state listed. Under NEB. REV. Stat. 37-807(3) state agencies are required to consult with NGPC for actions which may affect state listed species.*

Programmatic consultations can save valuable time for both the transportation and resource agencies through consistency and standardization. FHWA utilizes Programmatic Agreements to streamline project delivery timeframes. Programmatic consultation for E&T species is a method used to address an agency's multiple actions, where review and approval procedures have been standardized and agreed upon. This PA is the platform for fulfilling the requirements of the consultation process.

1.6 Proposed Action

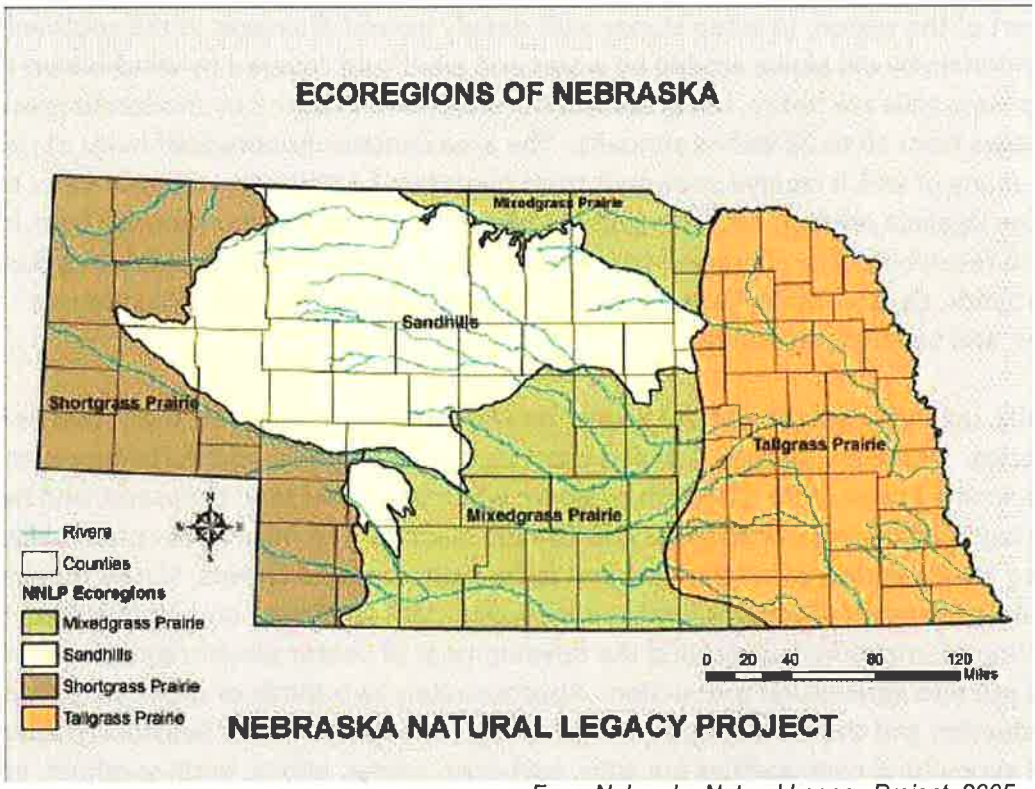
The proposed action is implementation of the Process. The Process uses a programmatic consultation approach to address projects covering construction and improvement of highways, bridges, trails, enhancement projects and other appurtenances using FHWA federal-aid highway funds and NDOR state funds (these projects are hereafter referred to as Transportation Projects). The Process provides a method for evaluating Transportation Projects. A matrix is used to evaluate potential impacts to Nebraska E&T species, resulting in either a "No Effect", "May Affect, Not Likely to Adversely Affect", or "May Affect" determination. "May Affect" determinations trigger consultation with the resource agencies.

2. PROJECT LOCATION

2.1 Ecoregions

The project location is the State of Nebraska. The state covers an area of 77,358 square miles ranging in elevation from a low of 840 feet mean sea level (msl) at the Missouri River in Richardson County in the southeast corner of the state, to a high of 5,424 feet msl at Panorama Point in Kimball County near the Wyoming border. The Nebraska landscape extends across four ecoregions (Figure 2.1), defined by the Nebraska Natural Legacy Project (2005) and described below.

Figure 2.1



From Nebraska Natural Legacy Project. 2005.

Tallgrass Prairie Ecoregion. This ecoregion covers the eastern fourth of the state, and extends west along the valleys of the Elkhorn, Republican, Platte, Loup, and Niobrara Rivers. The land surface consists of rolling hills intersected by stream valleys. The area is underlain by glacial till that has been eroded and mantled by wind-deposited silt (loess). Soils are deep, fertile, and have excellent water holding capability. Annual precipitation is 25 to 36 inches with three fourths of the rainfall occurring during the growing season. The ecoregion contains many streams and wetlands, including the Missouri River floodplain with its mosaic of oxbow lakes, backwater marshes, wet prairies and forests, Platte River floodplain with wet meadows, freshwater marshes, and many smaller streams, eastern Nebraska saline wetlands, and Todd Valley playas.

Historically, upland vegetation of the ecoregion consisted of tall stature grasses, with big bluestem, Indiangrass, switchgrass and Canada wildrye being the dominant grass species. The prairie also supported a wide variety of wildflowers and forbs such as showy goldenrod, prairie blazing star, sky blue aster and purple coneflower. Very little land area remains in native prairie cover types, with the majority of the ecoregion having been converted to agricultural row crops and bromegrass pasture. Principal agricultural commodities are corn, soybeans, wheat, oats, and alfalfa, as well as dairy cattle, pork and poultry. The state's two largest urban areas, Omaha and Lincoln, are located in the tallgrass prairie ecoregion.

Mixedgrass Prairie Ecoregion. This ecoregion covers the transition area between the tallgrass prairie to the east and shortgrass prairie to the west. The land surface consists of nearly level broad plains in the Rainwater Basin and along river drainages, to gently rolling hills in the north-central part of the region, to steep slopes with deeply incised drainages in the southwest. The area is underlain by old plains eroded by water and wind, and covered by wind-blown deposits. The deep loess soils are fertile, but grassland development is limited by moderate precipitation, which ranges from 20 to 28 inches annually. The area contains hundreds of miles of rivers and streams, many of which receive snowmelt from mountain headwaters. Groundwater resources include the Ogallala Aquifer, alluvial aquifers and artificial groundwater mounds from irrigation canals and reservoirs. The ecoregion contains an abundance of wetlands, including Rainwater Basin wetlands, Central Table Playa wetlands, Platte and Loup River sub-irrigated wet meadows, and Sandhills wetlands.

Historically, upland vegetation of the ecoregion consisted of a mixture of short, mid and tall grass species. Dominant species included short stature blue grama and buffalograss, mid stature sideoats grama, little bluestem, western wheatgrass and sand dropseed, and tall stature big bluestem, Indiangrass, switchgrass and Canada wildrye. The mixedgrass prairie also supported a wide variety of wildflowers and forbs such as prairie clovers, Illinois bundleflower, wild alfalfa, deer vetch, leadplant, prairie coneflower, stiff sunflower and blazing star. With the construction of irrigation projects and the development of center pivot irrigation systems, more land was put into agricultural production. Approximately two-thirds of the ecoregion is in row crop production and the remaining one-third is in grassland habitat for livestock grazing. Principal agricultural commodities are corn, soybeans, wheat, alfalfa, grain sorghum, and beef cattle.

Sandhills Ecoregion. The Sandhills ecoregion contains the largest dune system in the western hemisphere and one of the largest grass-stabilized dune regions in the world. The sand dunes are underlain by stream-deposited silt, sand, gravel, and sandstone. Soils are poorly developed with only a thin layer of topsoil and little organic matter. Annual precipitation ranges from 17 to 23 inches. High infiltration rates allow rainfall and snowmelt to percolate rapidly downward, and extensive aquifers occur beneath the area, including a portion of the Ogallala Aquifer. The high water table has resulted in the formation of nearly 2,000 shallow lakes and over a million acres of wetlands. While most of the lakes and wetlands are pH neutral, some areas are highly alkaline; other areas contain groundwater-fed fens with thick peat or muck soils. The ecoregion is drained by the Elkhorn, Niobrara, North Loup, Middle Loup, Calamus, Cedar, and Dismal

Rivers as well as many smaller streams. These derive most of their flow from groundwater, with flow being remarkably uniform throughout the year.

Two principal plant communities are found in the Sandhills ecoregion: the Sandhills dune prairie and the Sandhills dry valley prairie. The Sandhills dune prairie consists of a mixture of sand-adapted grasses, with sand bluestem, prairie sandreed, little bluestem and hairy grama as the dominant species. Typical forbs include stiff sunflower, bush morning glory and Plains gayfeather. Common shrubs are sand cherry, leadplant, prairie rose and yucca. The Sandhills dry valley prairie, occurring between the dunes, has taller stature grasses with big bluestem, Indiangrass, and switchgrass as dominant plant species. Forbs include western ragweed, white sage, and prairie coneflower. Shrubs include leadplant, Arkansas rose and western wild rose. Approximately 95 percent of the ecoregion is maintained as native grassland primarily for livestock grazing.

Shortgrass Prairie Ecoregion. This ecoregion extends across the western portion of the state and features dramatic changes in elevation and topography over relatively short distances. Soils range from sandy to clay-loam to hard sandstone. Annual precipitation is from 12 to 17 inches. The area contains a diversity of habitats including shortgrass prairie, mixedgrass prairie, sandsage prairie, sparsely vegetated badlands, western coniferous forest, playa wetlands, and North Platte River floodplain, tributaries, and wet meadows. The region is drained by the North Platte River, Upper Niobrara River, White River, and Lodgepole Creek, as well as by a number of small creeks. Five large reservoirs and a number of smaller artificial lakes provide aquatic and wetland habitats.

Two distinct prairie types occur in the ecoregion: short-grass prairie and mixed-grass prairie. Short-grass prairie communities are dominated by short stature grasses such as buffalograss, blue grama, sideoats grama, and purple threeawn. Forbs are plentiful and include milk vetches, scarlet gaura, cutleaf ironplant, spine-fruit prickly pear, purple locoweed, slender-flower scurfpea, prairie coneflower, and scarlet globemallow. Mixed-grass prairie is dominated by blue grama, prairie sandreed, threadleaf sedge, needle-and-thread grass, little bluestem, and western wheatgrasss. Common forbs are scarlet gaura, dotted gayfeather, skeletonplant, cutleaf ironplant, lemon scurfpea, and scarlet globe mallow. Shrubs include skunkbush sumac, winterfat, fringed sage, snowberry, yucca, and broom snakeweed. Approximately 87 percent of the northwest portion of the ecoregion is in grassland and used for grazing. In contrast, an estimated 88 percent of the southeast portion is in agricultural production, half of which is irrigated. Agricultural commodities include sugar beets, winter wheat, dry beans and sunflowers.

2.2 Nebraska Roadway Systems

The project location occurs along the roadway network in Nebraska. In total, these roadways make up a system of 96,555 miles, including:

- 9,950 miles on the Federal-aid and State Routes System, shown in Figure 2.2
- 77,928 miles of County roads
- 8,677 miles of municipal roads

2.3 Project Area

Throughout this PBA, the following terms apply:

Project Limits. The Project Limits are defined as the area between the project beginning and end points, from right-of-way boundary to right-of-way boundary, as marked on the construction plans, including temporary construction easements, detours, and any designated waste, staging, stockpile or material sites.

Environmental Study Area. This is the area that may be directly impacted by the construction activities of the project (including alternatives), plus areas containing environmental resources that may be affected by proximity to the project.

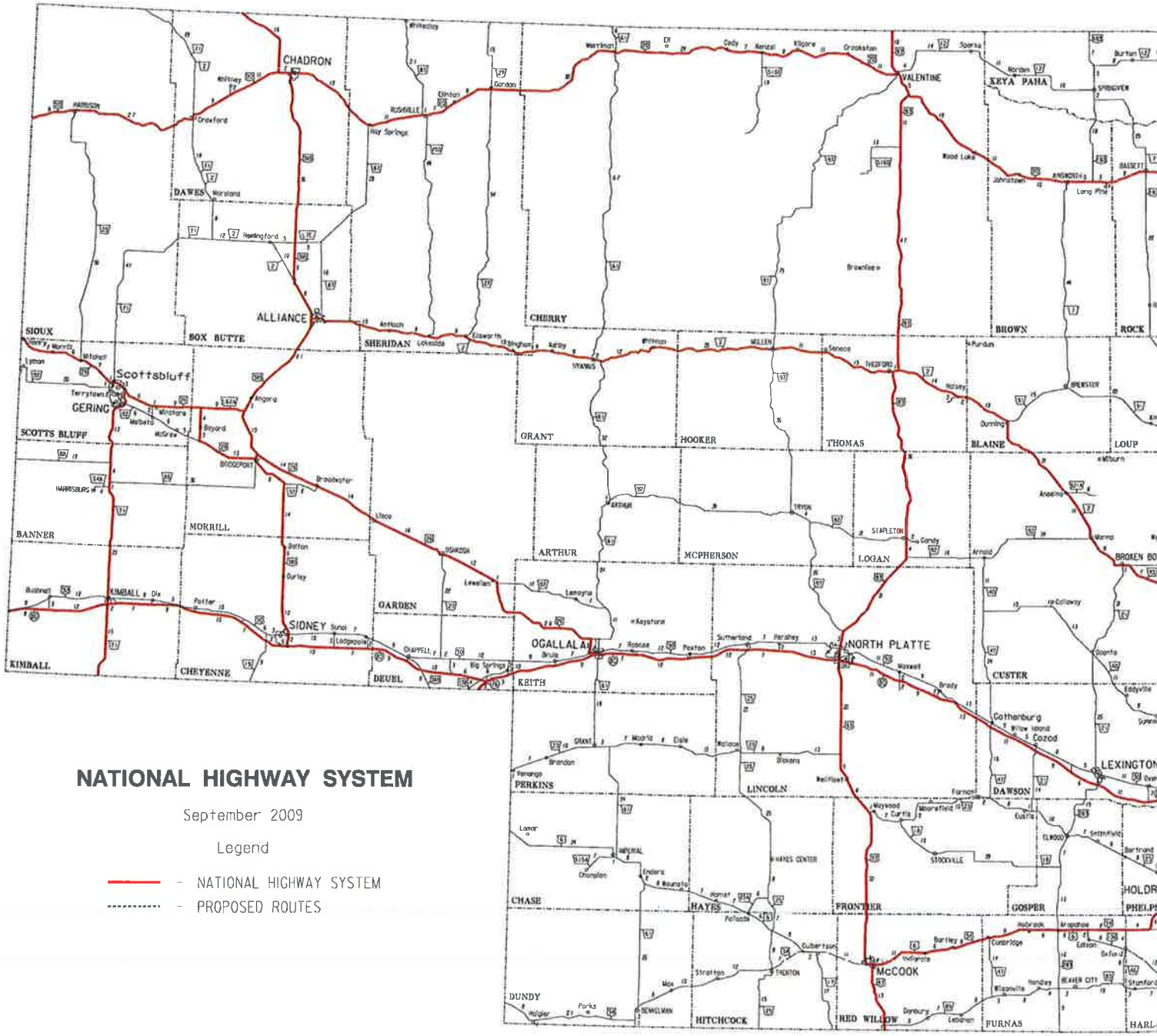
Project Vicinity. This term is used to denote a more expansive landscape context surrounding a given project.

2.4 Roadway Environment

Habitats within roadway rights-of-way vary considerably, ranging from highly disturbed environments (for example, cut and fill slopes) to relatively undisturbed natural vegetation, typical of the ecoregion and similar to that found on properties adjacent to the roadway right-of-way.

In general, roadway right-of-way habitat reflects major modifications caused by construction activities. Because of soil-moving activities, native soil profiles commonly are co-mingled, removing the original layered structure. Cut and fill areas result in engineered slopes, leaving little in the form of microhabitats, at least initially. Re-vegetation for stabilization and aesthetic purposes uses both a seed mixture and the soil seed bank for re-colonization. Maintenance activities such as mowing, tree removal, and weed control alter the roadside vegetation after it becomes established.

Over time, roadside environments tend to become similar to the vegetation typical of the ecoregion. NDOR research is showing that vegetation on adjacent properties has an impact on right-of-way vegetation composition within 10 years of planting the stabilization seed mixture.



NATIONAL HIGHWAY SYSTEM

September 2009

Legend

- NATIONAL HIGHWAY SYSTEM
- PROPOSED ROUTES

The right-of-way corridor is affected not only by precipitation that falls on it directly, but also by received run-on water from adjacent properties. This water may be irrigation water or storm flow from adjacent crop fields, or run-on from developed or residential properties. Water drains from the right-of-way via slopes, ditches and pipes.

Typical habitat conditions and features within roadway rights-of-way include:

Foreslope, Ditch, and Backslope - ***Rural*** highway rights-of-way include paved or turf shoulders, with vegetated foreslopes and backslopes and a ditch that may convey water periodically. Shoulders are mowed during the growing season. Foreslopes, ditches and backslopes are mowed approximately once every 5 years, depending on the roadway. While state owned right-of-way is entirely mowed once every five years, rural, non-state operated rights-of-way might not be mowed on a scheduled basis. Additional features within this setting may include guard rails, median barriers, and signs.

Urban roadsides in cities and towns have a more manicured appearance because of frequent mowing and landscaping at community entrances. Also, Municipal Separate Storm Sewer System (MS4) regulations may require permanent Best Management Practices for the post-construction setting. These may include detention basins, grassed swales, infiltration trenches, or bio-retention areas (rain gardens) to allow storm water infiltration. Additional features in urban rights-of-way include message boards, light poles, and cross-walks, in addition to guard rails, median barriers and signs.

Woodlands - Especially in the Pine Ridge escarpment and the Missouri River floodplain, woodland habitats are possible within the highway right-of-way. Likely, most trees were cleared at the time of original road construction. However, some re-colonization by tree species may have taken place. Woodland edge habitat is common along these rights-of-way.

Trees and shrubs are planted periodically in the roadside environment, but because of safety and maintenance concerns, never at densities approaching that of a woodland.

Mitigation Sites - When wetland and channel impacts are allowed by permit, project proponents frequently construct mitigation sites to offset those losses. These constructed sites may be located near the highway or may be separate, larger properties owned by NDOR, city or a county strictly for mitigation purposes. In many cases, the mitigation site is in a rural area and is accessible via county roads. Nonetheless, the property is transportation right-of-way. Habitats within these mitigation sites range from open water to moist soil to upland buffer, with vegetation reflecting the soil moisture conditions.

While channel and wetland mitigation sites are the most common for transportation projects, occasionally other natural resource mitigation may be warranted. This could include listed species habitat protection.

Streams and Rivers - Nebraska highways cross streams and rivers using culvert pipes, box culverts and bridges. River crossings may include deep water habitats (Yankton Bridge over the Missouri River, for example). Bridge abutments, riverbanks, and streambanks feature vegetated areas with moisture gradients terminating at the upland roadway fill. Habitats near box culverts and culvert pipes may also include habitats that vary in soil moisture, and may include herbaceous wetlands, riverbank fringe wetlands, sand bars, and backwater areas. Waterway flows may be permanent enough to run all year, or may be ephemeral. Transportation agencies may also use culverts to direct the flow of run-off and run-on water, independently from mapped stream and river crossings.

Rest Areas - Vegetation and landscaping features in rest areas are generally manicured to provide a visually pleasing oasis. Lawns near the building(s) and parking areas are mowed frequently. Plantings including trees may be native or horticultural selections and may depend on irrigation for success. Some NDOR rest areas include walking paths and picnic areas. Edge-of-woodland habitats and areas of seeded native grasses may also be part of some rest areas.

Operation and Maintenance Facilities - The roadside environment includes operation and maintenance facilities, such as office complexes and storage areas for supplies to support highway maintenance. These developments generally are vegetated by either lawn or early-successional volunteer species. Parking areas for fleet and employee vehicles, as well as maintenance equipment and supplies may surround any buildings at these facilities.

3. DESCRIPTION OF THE NEBRASKA BIOLOGICAL EVALUATION PROCESS

3.1 Proposed Action: Biological Evaluation Process

The proposed action is implementation of the Process. The Process uses a programmatic consultation approach to evaluate Transportation Projects. A matrix is used to evaluate potential impacts to Nebraska E&T species, resulting in either a "No Effect", "May Affect, Not Likely to Adversely Affect", or a "May Affect" determination. "May affect" determinations trigger consultation with the resource agencies.

3.2 Exclusions to the Process

A "No Effect" determination has been categorically given for the following activities (assuming that there are no rare or unusual circumstances):

- grants for training
- federal-aid system revisions which establish classes of highways on the Federal Highway system
- acquisition of scenic easements with no ground disturbance
- improvements to existing truck, weigh stations and rest areas with no ground-disturbing activities
- ridesharing activities
- bus and railcar rehabilitation
- rehabilitation of historic buildings
- alterations to buildings or vehicles to make them accessible for elderly or handicapped persons
- purchase of vehicles
- acquisition of land for hardship or protective purposes
- at-grade railroad crossing safety improvements with no ground disturbance outside the hinge point of the rail line or roadway

The following types of projects are not covered by the programmatic agreement, and require an Individual Biological Assessment and Section 7 consultation with USFWS and/or NESCA consultation with NGPC:

- new roadways on new alignments
- new traffic interchanges that would open new areas for development

3.3 Supporting Materials

The Process consists of the following materials.

Tab 1 ***Acronyms and Abbreviations***

Tab 2 ***Sources of Impacts Definitions***, describes the construction activities and other related activities associated with Transportation Projects. The construction activities are listed in Table 3.1, Sources of Impacts.

Tab 3 ***Checklist of NDOR Activities / Sources of Impacts*** is a list of the activities (sources of impacts) that will be required as part of a proposed project. The checklist is completed by the project designer or engineer, and is used by the project biologist to conduct the E&T species review.

Tab 4 ***NGPC List of Threatened and Endangered Species by County*** provides the estimated current ranges of listed threatened and endangered species in Nebraska.

Tab 5 ***USFWS Endangered, Threatened, Proposed and Candidate Species by County*** provides the federal list of species that are in some way associated with the state, including species that may not currently be occur in Nebraska.

Tab 6 ***Species Life Histories and Species Range Maps***

This section provides background on each of the Nebraska E&T species, including physical description, photograph, life history, distribution and habitat, status and limiting factors, management and recovery and references. This information was used to develop the habitat evaluation portion of the Species Evaluation Parameters form, Conservation Conditions, and the effects and justifications in the Effects Analysis Tables.

Species Range Maps illustrate the distribution of the species within the state based on the best available information. This information was used to develop the habitat evaluation portion of the Species Evaluation Parameters form.

Tab 7 ***Species Evaluation Parameters form (SEP)*** provides an evaluation process for (1) determining if a project is within 5 miles of a record of a Nebraska E&T species or is on the county list of occurrences for the species, and (2) identifying potential suitable species habitat within the Project Limits of that project.

Tab 8 ***Federal and State Listed Species Conservation Conditions (CCs)*** provides measures to avoid or minimize project impacts so that the resulting project will have insignificant or discountable effects on the Nebraska E&T species. Five types of Conservation Conditions have been identified:

- General Conservation Conditions for All Projects
- General Conservation Conditions for Specific Impacts/Activities
- Standard Conservation Conditions for Specific Ranges
- Standard Conservation Conditions for Species
- Non-Standard Conservation Conditions – these are conditions that maybe created for a specific project

Tab 9 ***Effects Analysis Tables (Tables)*** are tables that provide the rationale used in determining effect on each of the Nebraska E&T Species with consideration given to Conservation Conditions.

Tab 10 ***Federal Species Matrix and State Species Matrix (Matrix)*** identify the sources of impacts and establish the determination of effect on the Nebraska E&T species. Conservation Conditions for selected species are applied where appropriate.

Tab 11 ***Species Survey Protocol*** includes the methodologies for conducting species surveys required by the Process.

Tab 12 ***Individual Project Level Evaluation (IPLE)*** is the document prepared for species and activities with determinations of "May Affect" or of "May Affect, Not Likely to Adversely Affect" where the conservation conditions cannot be met, or clearly do not apply to the circumstances. This document provides a template and guidance for preparation of an IPLE.

Tab 13 ***Individual Biological Assessment (IBA)*** is the document prepared for species and activities when the size and/or nature of the project and associated indirect impacts could not be adequately addressed with the programmatic consultation process (such as new roadways on new alignments and new traffic interchanges that would open up new areas for development). This document provides a template and guidance for preparation of an IBA.

Tab 14 ***Overview of Effects and Required Conservation Conditions (OERCC)*** is the summary documentation form for the Biological Evaluation Process. The form is used to document the (a) effect determination for an individual project that has been reviewed under the Process, (b) applicable Conservation Conditions, and (c) approval of the reviews.

Tab 15 ***Glossary of Terms*** is provided to assist the reader with the terms and acronyms used in the documents and supporting materials for the Programmatic Agreement and Biological Evaluation Process.

Table 3.1
Sources of Impacts

Asphalt Patching
Bank Stabilization
Barge Staging
Bridge Deck Repair
Bridge Deck Replacement
Bridge Painting
Bridge Rail Repair/Replacement
Bridge Substructure New, Replacement, or Repair-Ephemeral
Bridge Substructure New, Replacement, or Repair-Intermittent
Bridge Substructure New, Replacement, or Repair-Perennial
Bridge Superstructure New, Replacement, or Repair-Ephemeral
Bridge Superstructure New, Replacement, or Repair-Intermittent
Bridge Superstructure New, Replacement, or Repair-Perennial
Channel Grade Stabilization Structures
Channelization-Ephemeral
Channelization-Intermittent
Channelization-Perennial
Clearing and Grubbing
Cofferdams
Concrete Pavement Repair
Crack Sealing and Joint Sealing
Culvert New, Replacement, Extension, Repair-Ephemeral
Culvert New, Replacement, Extension, Repair-Intermittent
Culvert New, Replacement, Extension, Repair-Perennial
Trenched Widening
Curb and Gutter
Curb and Flume
Detention Basin
De-watering
Drilled Shafts
Earth Shoulder Construction
Erosion Control-Barriers
Erosion Control-Erosion Checks
Erosion Control-Inlet/Outlet Protection
Erosion Control-Mulching
Erosion Control-Post-construction Erosion Control
Erosion Control-Rolled Erosion Control
Erosion Control-Slope Interruption
Erosion Control-Traps and Basins
Erosion Control-Vegetation
Fencing
Grading Above the Hinge Point
Grading Below the Hinge Point
Guardrail Repair with Soil Disturbance
Guardrail Repair without Soil Disturbance
Habitat Fragmentation, Modification of Connectivity
Landscaping
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs with soil disturbance
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs without soil disturbance
Microsurfacing
Milling and/or In-place Recycling
Nighttime Work with Lights
Noise Walls (not in waters/wetlands)
Overpass
Pavement Marking
Pavement Removal
Paving
Piers
Pile Driving-Impact
Pile Driving-Vibratory
Pile/Pier Encasement
Pipe Jacking and Casing
Pre-watering
Removal of Structures and Obstructions
Replacing a Bridge with a Culvert
Resurfacing-Fog/Slurry Seal, Armor Coat/Chip Seal
Retaining Walls (not in water/wetlands)
Rock or Gravel Surfacing
Shoo-fly
Sidewalks and Bikeways
Signs with Soil Disturbance
Signs without Soil Disturbance
Stream Channel Impact-Ephemeral
Stream Channel Impact-Intermittent
Stream Channel Impact-Perennial
Survey and Staking
Temporary Crossing, Causeway, Work-Platform
Trenched Widening
Underground Utility Conduit
Wetland Mitigation

3.4 Steps of the Biological Assessment (Project Level Review)

For each individual project, the use of the Process tools results in the preparation of documentation referred to as the ***Biological Assessment*** (BA). The steps are summarized in Figure 3.1, *Nebraska Biological Assessment Flowchart*. NDOR is the responsible party for the completion of project level BAs. NDOR Environmental Section qualified biologists will either directly complete the BA, or will provide guidance, oversight, and quality review of the BA completed by a local government or consultant. Upon receipt of project information, including the Project Description, Checklist of Activities / Sources of Impacts, and Location Map, the following steps are completed:

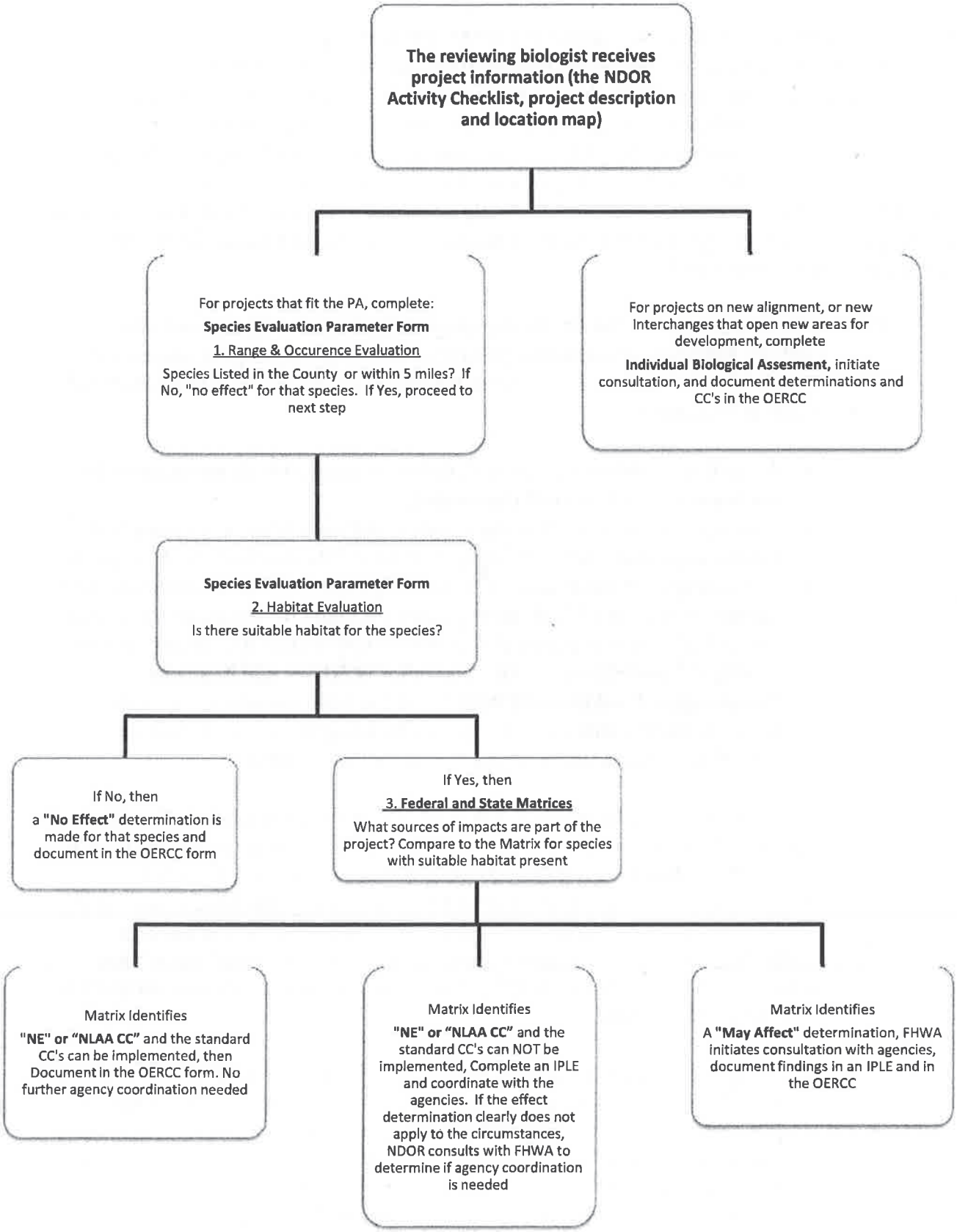
1. For projects that fit the PA, the first step in the Process is to complete the ***Species Evaluation Parameters*** (SEP) form (Tab 7) to identify the species that require further evaluation, based on the Range and Occurrence Evaluation and Habitat Evaluation.

    - A "No Effect" determination is made for species which do not occur in the county or within 5 miles of the project.
    - If the species does occur in the county or within 5 miles, but no suitable habitat is present, then a "No Effect" determination is made for that species.
    - If it is determined that suitable habitat does not exist for any Nebraska E&T Species, then a "No Effect" determination is made for the project as a whole. The SEP form is kept as part of the administrative record to document ESA and NESCA compliance, and the ***Overview of Effects and Required Conservation Conditions (OERCC)*** form (Tab 14) is completed. No other forms or written analyses are required for compliance, and no further consultation is required with the FHWA, USFWS or NGPC.

2. If suitable habitat is identified in the project area for some species, then those species will be carried forward and evaluated using the ***Federal Species Matrix*** *and* ***State Species Matrix (Matrix)*** (Tab 10). The Matrix provides effect determinations for each species, based on each activity identified as part of the scope of the project. These activities are described in ***Sources of Impacts Definitions*** (Tab 2). The Matrix determinations are: "No Effect" (NE); "May Affect, Not Likely to Adversely Affect" with Conservation Conditions (NLAA CC); and "May Affect" (MA).

    - For species and activities with determinations of "No Effect" or "May Affect, Not Likely to Adversely Affect" with Conservation Conditions, for which all the standard conservation conditions for that species/activity can be met by the project proponent, the analysis is complete. The SEP form is kept as part of the administrative record to document ESA and NESCA compliance, and the ***OERCC*** form (Tab 14) is completed. No other forms or written analyses are required for compliance, and no further consultation is required with the FHWA, USFWS or NGPC.

Figure 3.1
FLOW CHART OF THE NEBRASKA BIOLOGICAL ASSESSMENT PROCESS (Project Level Review)



- For species and activities with determinations of "May Affect, Not Likely to Adversely Affect" for which the standard conservation conditions cannot be implemented, or for species and activities with determinations of "May Affect", either an Individual Project Level Evaluation (IPLE) (Tab 12) or Individual Biological Assessment (IBA) (Tab 13) shall be prepared. FHWA initiates consultation with USFWS and NGPC. If the effect determination clearly does not apply to the circumstances, NDOR consults with FHWA to determine if consultation with the USFWS and NGPC is necessary.

    - If the effect determination applies only to state listed species (species that are not federally listed), then consultation is conducted only with NGPC, with a courtesy copy of the IPLE or IBA sent to USFWS. The Programmatic Agreement outlines details of the consultation procedures. It is possible that even though an activity is identified in the evaluation process, standard consultation procedures may still be required if NDOR finds any ambiguity surrounding the proposed project and its subsequent practices.

- If conservation conditions for a specific project appear contradictory, the NDOR Biologist will either stipulate in the OERCC form where within the project limits each apply, or will only include the most restrictive CC. Within the notes section of the OERCC, the NDOR biologist will document which condition was dropped, and the reason why, if applicable. In this instance, an IPLE is not needed.

3.5 Reporting and Monitoring

Twice a year (in January and July) NDOR will prepare a report listing all federal and state funded projects, including Local Public Agency projects that have received programmatic concurrence through the Process.

For projects meeting the criteria of "No Effect", the report will include project name, federal-aid number, control number, location of project, and project proponent.

For projects meeting the criteria of "May Affect, Not Likely to Adversely Affect", the report will include project name, federal-aid number, control number, location of project, and project proponent, as well as the species that the project "May Affect, Not Likely to Adversely Affect" for which Conservation Conditions were applied.

The report will be submitted to FHWA, NGPC and USFWS, each of whom will conduct a review to determine if the Process is working. The reviewing agencies may request copies of the BAs for projects listed in the reports, or additional clarifications from NDOR if needed. If issues are identified that need to be addressed, the Programmatic Agreement includes provisions for resolving the issue.

3.6 Need for Re-Assessment Based on Changed Conditions

The findings of this Program Biological Assessment are based on the best current data and scientific information available. The Program Biological Assessment will be re-evaluated if (1) the sources of impacts as defined in this consultation are added to or subsequently modified in a manner that causes an effect which was not evaluated in this assessment, (2) new species information is revealed that changes the effect on the Nebraska E&T species in a manner or to an extent not covered by this assessment, (3) a new species is listed or critical habitat is designated that was not evaluated in this assessment, or (4) implementation of the agreed-upon conservation conditions becomes consistently problematic.

A review of this Biological Assessment and the Process will be performed on an annual basis by a review team. Members of this review team will include NDOR biologists, FHWA, USFWS and NGPC. Amendments and additions to the Biological Assessment and Process materials will be revised annually, or as agreed upon by all parties.

4. SPECIFIC PROJECT REVIEW USING THE PROCESS

The specific project review includes an analysis of the effects of proposed FHWA Transportation Projects on Nebraska E&T Species, including designated critical habitat. Disturbances are those associated with a variety of federal-aid projects in Nebraska. Activities include new construction, maintenance and/or repair of roads, bridges, abutments, culverts, signs, fencing, and other associated features (see Table 3.1).

This analysis evaluates the degree to which the species/habitat will be affected by direct and indirect impacts, together with the effects of other activities that are interrelated or interdependent with the specific activity. This includes considerations of context, intensity, duration, and timing. The action area, as defined by the ESA, includes all areas to be affected directly or indirectly by the Federal action and is not limited merely to the immediate area involved in the action [50 CFR 402.02]. Likewise, interdependent actions are actions having no independent utility apart from the proposed action. Interrelated actions are part of a larger action and depend on the larger action for their justification [50 CFR §402.02].

For each of the Nebraska E&T species, habitat evaluation and determination of effects are evaluated in same manner, as follows in Sections 4.1 through 4.7:

4.1 Species to be Evaluated Individually

The species to be evaluated are those federal and state listed species in Nebraska. In addition, to ensure efficient transportation program delivery in the event new species are listed as E&T, candidate species are also addressed through this consultation process. As of the date of this document, the species are those listed in Table 4.1.

In the event a new species is listed, becomes a candidate for listing as threatened or endangered, or if critical habitat is designated, the Programmatic Agreement has provisions for adding the species and/or critical habitat to the Program consultation process.

4.2 Habitat Evaluation and Suitability

For each individual project, habitat evaluation and suitability are assessed during completion of the *Species Evaluation Parameters* form (Tab 7). This form requires the preparer to provide information on habitats within the project area and to review known range and occurrence records, using the following procedures:

1. If the project does not occur within a county in which the species is listed, and if there are no Natural Heritage records (since 1975) within 5 miles of the project, then the project is considered to have "No Effect" on the species. (At this time, records prior to 1975 are considered historic, since recommendations of the Nebraska Natural Legacy Plan were published in 2005 based on the previous 30 years of data). This is because based on the best scientific and commercial data available (survey data, known range information, listing information), little potential exists for the species to occur in the project vicinity.

Table 4.1
Nebraska E&T Species

Common Name	Scientific Name	Federal Status	State Status
American burying beetle	*Nicrophorus americanus*	Endangered	Endangered
American ginseng	*Panax quinquefolius*	--	Threatened
Black-footed ferret	*Mustela nigripes*	Endangered	Endangered
Blacknose shiner	*Notropis heterolepis*	--	Endangered
Blowout penstemon	*Penstemon haydenii*	Endangered	Endangered
Colorado butterfly plant	*Gaura neomexicana coloradensis*	Threatened	Endangered
Eskimo curlew	*Numenius borealis*	Endangered	Endangered
Finescale dace	*Phoxinus neogaeus*	--	Threatened
Gray wolf	*Canus lupus*	Endangered	Endangered
Interior least tern**	*Sternula antillarum athalassos*	Endangered	Endangered
Lake sturgeon	*Acipenser fulvescens*	--	Threatened
Massasauga	*Sistrurus catenatus*	--	Threatened
Mountain plover	*Charadrius montanus*	--	Threatened
Northern redbelly dace	*Phoxinus eos*	--	Threatened
Pallid sturgeon**	*Scaphirhynchus albus*	Endangered	Endangered
Piping plover**	*Charadrius melodus*	Threatened	Threatened
River otter	*Lutra canadensis*	--	Threatened
Salt Creek tiger beetle*	*Cicindela nevadica lincolniana*	Endangered	Endangered
Saltwort	*Salicornia rubra*	--	Endangered
Scaleshell mussel	*Leptodea leptodon*	Endangered	Endangered
Small white lady's slipper	*Cypripedium candidum*	--	Threatened
Southern flying squirrel	*Glaucomys volans*	--	Threatened
Sturgeon chub	*Macrhybopsis gelida*	--	Endangered
Swift fox	*Vulpes velox*	--	Endangered
Topeka shiner*	*Notropis topeka*	Endangered	Endangered
Ute ladies'-tresses	*Spiranthes diluvialis*	Threatened	Threatened
Western prairie fringed orchid**	*Platanthera praeclara*	Threatened	Threatened
Whooping crane**	*Grus americana*	Endangered	Endangered

**Critical habitat also listed for this species.*

** Platte River species

2. If the species is listed for the county or if there are Natural Heritage records (since 1975) within 5 miles of the project, then the project is further evaluated for potential habitat. The Biological Evaluation Process defines specific habitat parameters that, if present (a "Yes" answer on the SEP form), the project is considered to have potential habitat for that species.

3. The project is also reviewed for records of species occurrence (since 1975) within 1 mile of the project limits. If occurrences are documented within 1 mile of the project, then indirect and cumulative effects are analyzed for the project. The 1 mile threshold was determined to be adequate for an indirect and cumulative effect analysis because the close proximity of the species could lead to a higher likelihood for impacts to that species later in time (indirect impact), and a higher likelihood of cumulative impacts resulting from other activities within the project vicinity.

4. If the project limits do not contain potential habitat for a certain species, then the project is considered to have "No Effect" on that species. This is because based on the best scientific and commercial data available (known habitat needs, known range information, or listing information), little potential exists for the species to occur in the project vicinity.

4.3 Types of Effects and Their Analyses

Three types of effects are analyzed as part of the Process: direct, indirect and cumulative.

Direct Effects - Direct effects are impacts resulting from the proposed action at the same time and in the same place as the action. For example, grading associated with a new road removes soil and vegetation at the site and, if a listed species is present, destroys the species and its habitat. Additional examples include construction noise disturbance, loss of habitat, or sedimentation that may result from the construction activity.

For the Process, direct effects are analyzed and documented by using the *Federal Species Matrix* and *State Species Matrix* (Tab 10), which list activities and the determination of their effects on the Nebraska E&T species with consideration given to application of the Conservation Conditions.

Indirect Effects - Indirect effects are those effects that are caused by or will result from the proposed action later in time, but are still reasonably certain to occur [50 CFR §402.02]. Examples include changes to ecological systems, such as predator/prey relationships, long-term habitat changes or anticipated changes in human activities, including changes in land use. These are "downstream" impacts, future impacts, or the impacts of reasonably expected connected actions (e.g., discharging sediments into a river would affect the water quality and aquatic species beyond the actual site of the release; land development of an area after a highway is completed).

For the Process, indirect effects are analyzed and documented in three steps. First, indirect effects are evaluated as part of the *Species Evaluation Parameters* form, which includes a box for describing indirect and cumulative effects. Indirect effects are analyzed for the project, if occurrences of a given species are documented within 1 mile of a project or if the effects are not captured elsewhere in the Process. If NDOR believes that there may be indirect impacts, then the activity will be given a "May Affect" determination.

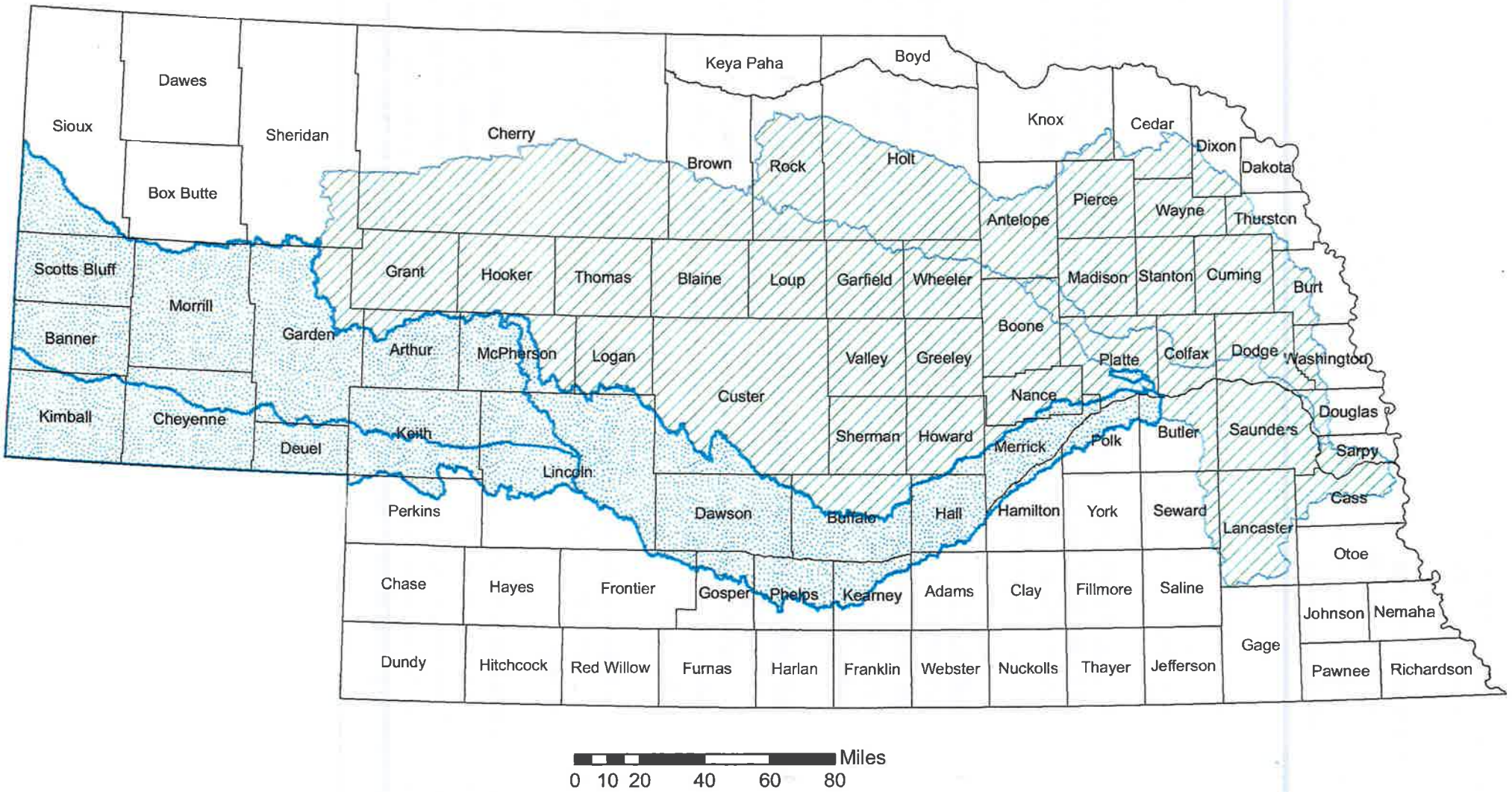
In the second step, indirect effects are evaluated using the *Federal Species Matrix and State Species Matrix* (Tab 10). The matrix lists construction activities and other related activities and the determination of their effects on the Nebraska E&T Species. The determination of effects is based on the assumption that the Conservation Conditions, as appropriate, will be implemented for the project.

The Process's third step involves evaluating Platte River depletions, which could have indirect effects on water-dependent species in the Platte River basin. The Lower Platte basin has been identified as being in a state of jeopardy, and depletions within this area require individual consultation with the USFWS. Depletions within the Platte River Implementation Recovery Program (North, South and Middle Platte basins) fall under the programmatic agreement for that area. These basins are identified in Figure 4.1. At this time, an interim Platte River Depletion analysis process has been developed and is included in the Conservation Conditions document under S-2. As agreed to as part of the PA, a more formalized Platte River Depletion analysis process will be developed in the future.

Cumulative Effects - Cumulative effects are the effects of future State, tribal or private activities (non-Federal activities), that are reasonably certain to occur within the action area of the Federal action subject to consultation [50 CFR §402.02]. This definition applies only to Section 7 analyses and should not be confused with the broader use of this term in the National Environmental Policy Act or other environmental laws. Cumulative effects include the overall effect of the project combined with effects from future non-federal activities that are reasonably certain to occur in the foreseeable future.

For the Process, cumulative effects are analyzed and documented as part of the *Species Evaluation Parameters* form, which includes a box for describing indirect and cumulative effects. Cumulative effects are analyzed for the project if occurrences of a given species are documented within 1 mile of a project, or if the effects are not captured elsewhere in the Process. For example, if during the review process for a federal-aid project, occupied habitat for a species is identified within 1 mile of the project limits, the reviewer would look for other known activities occurring by other entities, independent of the road activity, within the project vicinity. Examples include farm expansions, parking lot construction, mining, developments, etc. The reviewer would then determine if the combination of activities could create an adverse affect to that species. If NDOR determines that the combination of these activities may adversely affect the species (cumulative impacts), then the activity will be given a "May Affect" determination and consultation with the agencies shall occur.

River Basins that have potential to impact Platte River Flows (depletion concerns).



Legend

Basins Associated with the Lower Platte

Platte River Implementation Recovery Program

Platte River Pr n = North, South and Middle Platte Basins
Associated Basins = Elkhorn, Loup and Lower Platte Basins

Note: The Lower Platte Basin has been identified to be in a state of jeopardy. Individual consultation with the U.S. Fish and Wildlife Service would apply for Platte River depletions. Depletions within the Platte River Implementation Recovery Program would fall under a programmatic consultation.

4.4 Conservation Conditions

Conservation conditions (Tab 8) are actions to be taken to avoid or minimize impacts. Conservation conditions are implemented when a project activity has been identified as having an impact on a listed species or critical habitat. The Process includes five types of Conservation Conditions:

1. General Conservation Conditions for All Projects (A-1 to A-7). These conditions are over-arching measures, applicable to every FHWA transportation project evaluated using the Process.

2. General Conservation Conditions for Specific Impacts/Activities, as applicable (S-1 to S-5). These conditions are impact or activity specific (fencing, revegetation, species surveys, work in environmentally sensitive areas, refueling, and work in the Platte River basin).

3. Standard Conservation Conditions for Species Ranges (R-1 to R-11). These conditions are species specific and are applicable for any project occurring within the range and habitat of a specific species (Salt Creek tiger beetle, American burying beetle, whooping crane, interior least tern, piping plover, southern flying squirrel, massasauga, and mountain plover).

4. Standard Conservation Conditions for Species (ABB-1 to WC-CH-3). Implementation of these Conservation Conditions for specific species will result in a reduction of impacts from the threshold of a "May Affect, Likely to Adversely Affect" determination to a "May Affect, Not Likely to Adversely Affect" determination.

5. Non-Standard Conservation Conditions. Project-specific conservation conditions to avoid or minimize impacts may be developed on a project-by-project basis, as needed.

It should be noted that there are no Conservation Conditions for the black-footed ferret, Eskimo curlew, or gray wolf. Because there are no known permanently occupied or seasonally used habitats for these species in Nebraska, it has not been possible to determine appropriate Conservation Conditions. However, because the species are rare, resource agencies still consider whether project impacts should raise the effect determination to "May Affect".

4.5 Determination of Effects

If the project limits contain potential habitat for certain species, then those species are further evaluated using the Matrix (Tab 10). The Matrix considers the effects of project activities on individual species with the implementation of the Conservation Conditions. The justification for these effect determinations is contained in the Effect Analysis Tables (Tab 9). The Matrix can have three possible outcomes.

1. If the Matrix indicates a "No Effect" determination for a species under evaluation, then the proposed project will be covered by a programmatic concurrence. The proposed actions can proceed once the appropriate documentation is in place and there is a commitment to implement the appropriate conservation conditions.

2. If the Matrix indicates a "May Affect, Not Likely to Adversely Affect" determination for a species under evaluation, then the proposed project will be covered by a programmatic concurrence. The proposed actions can proceed once the appropriate documentation is in place and there is a commitment to implement the appropriate conservation conditions.

3. If the Matrix indicates a "May Affect" determination for any species, then programmatic concurrence will not apply for that species, and coordination with FHWA, USFWS, and NGPC is required.

Due to the complexities of habitat fragmentation, the matrix identifies any habitat fragmentation as a "May Affect" condition. NDOR shall review individual projects to determine if habitat fragmentation concerns or opportunities to improve connectivity may exist, based on suitable habitat of a listed species occurring within the project area, the scope of the project, and the life history of the species in question. If NDOR determines there may be a habitat connectivity concern for a project under review, a consultation with FHWA and the signatory agencies will occur. Upon future reviews of the tools and Programmatic Agreement, the concept of habitat connectivity will be re-addressed and clarified, as appropriate.

4.6 Implementation of Conservation Conditions

The Process provides for implementation of Conservation Conditions by requiring them to be:

1. Listed in the Overview of Effects and Required Conservation Conditions (OERCC) form with the Responsible Party for the measure identified;
2. Carried into the NEPA decision document;
3. Repeated in the Status of Environmental Commitments form (Green Sheet);
4. Included as specific conditions of the Construction Contract; and
5. Implemented in the field.

5. EVALUATION OF IMPACTS TO E&T SPECIES THROUGH PROCESS IMPLEMENTATION

At the project level, the Process focuses on the standardization of impact assessments, conservation conditions that could be applied on a per-project basis, and documentation of the project-level evaluation. Direct effects at the project implementation level are identified, and methodologies are developed to formalize when project-level indirect and cumulative effect analysis are needed. The intent of this section is to take a holistic look at the implementation of the Program to determine what effects, if any, would occur to protected species and critical habitat.

5.1 Program Level Impact Evaluation of Process Implementation

The conservation conditions developed as part of the Process follow a three-tier approach: (1) general conservation conditions that apply to all projects, (2) conservation conditions that apply within the range of specific species, and (3) conservation conditions that apply according to the effect determinations in the Matrix. The general conservation conditions act as programmatic best management practices to prevent unanticipated direct or indirect impacts to species during construction. The conservation conditions that programmatically apply to all projects within certain species ranges are in place to manage unanticipated construction impacts, such as change orders to complete work at night or the killing of venomous snakes. By anticipating possible construction-related actions that might occur (but that may not have been identified during project planning) and by putting programmatic conditions in place to address them, the Process reduces the impacts of possible construction actions to a discountable level.

The PA commits all consulting parties to implement this Program in good faith and to uphold the agreed-upon conditions. The proper implementation of the Program using the PA will prevent adverse effects to species and critical habitat. As outlined in the PA, annual reviews will serve as a check-and-balance to ensure the commitments made in the PA are being adhered to, and will ensure that unanticipated impacts to species have not occurred through the use of the Program. If unanticipated impacts are identified during these annual reviews, modifications to the Program will be made. If modifications to the Program cannot be made to the agreement of all parties, the Program may be discontinued as identified in the PA, and individual project level consultations will resume. Therefore, the PA in itself functions as a program conservation condition, creating commitments and procedures implemented by concurrence to avoid adverse affects to species.

The tools developed as part of this Process were tested and improved through implementation of a pilot phase. During the pilot period 307 projects were reviewed and documented using the Process (see Table 5.1).

TABLE 5.1
PROJECTS APPROVED DURING THE MATRIX PILOT PHASE

CN	Project No	Project Name	No effect to all species per matrix, used the SEP form, FHWA approval only (put x in box if true)	IPLE or MEMO used to document Matrix didn't fit (put x in box if true and note spp)	NLAA CC per matrix, agencies concurred (name spp with NLAA CC)	MA per matrix, consulted with agencies (name spp with NLAA CC)	IBA was written for the project	Brief phrase description of scope
00779	STWD-88	Install Yield Signs and Replace Cross-buck Signs at Passive Public BNSF Crossings Statewide			X, tern, plover, crane			Sign replace at RR crossings
00783	STWD-89	Install Yield Signs at Passive Public Union Pacific Crossings Statewide			X, tern, plover, crane			Sign replace at RR crossings
00812	100	Districtwide	X					Stwd traffic signals in urban areas
00813	HSIPSTWD-101	Districtwide	X					Stwd traffic signals in urban areas
11678	86-106	Barneston West			X, Massasauga			Bridge replace on county Rd over Big Blue
12012	7080-40	Beaver Cross SW		X, crane				Bridge replace on county rd
12035	1367-121		X					Milling, paving, trench widening
12222	1031-108	Crete North		X, crane				Concrete repair
12299	3265-5	In Wymore	X					Bridge replace over Big Indian Creek
12300	3285-5	Filley North	X					Bridge replace over Mud Creek
12312	809-872	I-80 Upgrade	X					Mahoney Park Interchange Ramps
12381	1597-105	Rulo Bridge						Bridge
12519	7076-16	Dorchester SE		X, crane				Bridge
12541	3305-9	Denton East	X					Road reconstruction
577	2982-1	In Friend	X					Concrete pavement replacement
12696	STPP-6218(1)	**11th St. -10th to 14th**			X, river otter			Street widening
12744	5267-1	Southwest 40th Street		X, Salt Creek Tiger Beetle, Saltwort				Paving and bridge
12764	7013-12	Weeping Water SE		X, river otter				Bridge replacement
12773	87-113	Burchard South			X, massasauga			Resurfacing, trench widening, cable guardrail
12784	STPAA-6204(4)	**11th Corso-10th to 12th**			X, river otter			Street widening
12786	3280-4	Sprague East	X					Bridge
12850	7076-18	Friend South		X, crane				Bridge
12859	3265-9	Hickman North	X					Rebuild roadway
12864	7055-102			X, Salt Creek Tiger Beetle				Bridge
12876	346-136	In Seward	X					Resurfacing, curbs, signals
12879	55-160	Jamaica Trail Phase 2	X					Trail
12928	5254-8	Super St, I-180 E Ramp	X					Ramp
12936	47-105	Humboldt East & West	X					Resurfacing, culverts
12938	6217-3	4th Corso Overlay		X, river otter				Overlay
12946	5266-2	Lincoln West O Hist Hwy	X					Historic enhancement
12953	66-159	US-6, N-103 intersection		X, whooping crane				Roundabout
12957	772-159	Oak Creek Bridge		X, pallid sturgeon, lake sturgeon, sturgeon chub, river otter				Bridge replacement, culvert work
12961	808-147	Goehner to Milford		X, whooping crane				Resurfacing
12990	416-113	Wilber West	X					Resurfacing
13012	772-160	US-77/Woodcliff Rd	X					Intersection Modifications (add left turn lane)
13018	666-105	Dwight to N-79		X, river otter, crane				Resurfacing, bridge deck and pier repair
024	7064-19	Brock Northwest	X					Bridge replacement
031	3615-8	Preston North and South		X, river otter				Paving
13037	LCLC-34-6(140)	**"O" St. resurfacing**	X					
13038	LCLC-5247(11)	**St. Pkg. "D"-resurfacing**	X					

CN	Project No	Project Name	No effect to all species per matrix, used the SEP form, FHWA approval only (put x in box if true)	IPLE or MEMO used to document Matrix didn't fit (put x in box if true and note spp)	NLAA CC per matrix, agencies concurred (name spp with NLAA CC)	MA per matrix, consulted with agencies (name spp with NLAA CC)	IBA was written for the project	Brief phrase description of scope
13039	LCLC-5214(4)	**St. Pkg. "C"-resurfacing**	X					
13040	LCLC-5236(2)	**St. Pkg. "B"-resurfacing**	X					
13041	LCLC-5220(3)	**St. Pkg. "A"-resurfacing**	X					
13043	LCLC-5254(9)	**Superior St. Bridge**	X					
13046	LCLC-5280(1)	**Saltillo Rd. resurfacing**	X					
13055	66-34	Steinhart Park Trail		X, river otter, pallid sturgeon, lake sturgeon, sturgeon chub				Trail
13059	34-28	Beatrice Homestead Trail		X, massasauga				
13063	55-170	Wyuka Stables Restoration	X					Building rehab
13065	1-101	Dist. 1 High Mast Towers	X					
13067	LCLC-5244(7)	**Holdrege St. 33rd-47th**		X, salt creek tiger beetle				
13068	LCLC-5250(3)	**Adams St. 57th-62nd St.**		X, salt creek tiger beetle				
13081	LCLC-5247(12)	**70th St. Aylesworth-Vine St.**		X, salt creek tiger beetle				
13082	LCLC-5244(8)	**Holdrege St. 70th-79th**		X, salt creek tiger beetle				
13086	6108-1	Beatrice City Wide Resurfacing	X					Resurfacing
13087	86-114	S. Jct. N-15 West		X, crane				Resurfacing
13096	5239-8	Lincoln Citywide Durable		X, salt creek tiger beetle				Pavement marking
13097	5221-3	OA 50 Challenge proj		X, salt creek tiger beetle				Crosswalk marking
13107	808-149	Goehner West		x crane				Resurfacing
3108	808-515	Milford - Air Park		X, whooping crane				Resurfacing, bridge deck repair
3113	809-58	Airpark W, Jct US-77	X					Resurfacing
13127	6105-6	2nd St, Court to Ella, Beatrice	X					Historic preservation
13131	632-115	Alvo - I-80	X					Resurfacing
13137	5231-13	27th & Leighton Viad Rehab	X					Viaduct rehab
13139	5249-7	Lincoln Streets Microsurf	X					Microsurfacing and repair
13140	5230-2	Lincoln Dwntwn Str Resurf	X					Resurfacing
13164	26-122	N-2, 56th - 84th	X					Resurfacing
13166	416-114	North Jct N-15 West	X					Resurfacing
20263	2757-101	Remnant Land Sale		X				Land sale
20734	809-10	I-80 to 72nd I Omaha	X					
21791	1333-102	N-36 North, Omaha	X					Reconstruction to 4 lane
21953	5625-2	Bell Street - Phase 2	X					Reconstruction
21985	773-122	Winslow - Uehling	X					
22026	7089-23	Blair West	X					Replace bridge with a culvert
22048	27-47	Fremont Lakes State Trail		X, river otter, interior least tern, piping plover, pallid sturgeon, lake sturgeon, sturgeon club				Bike trial
22058	BRO-7028(44)	**Pawnee Rd. Bridge repl.**	X					
22059	BRO-7028(45)	**Rainwood Rd. Bridge rep.**		X, river otter, pallid sturgeon, sturgeon chub, lake sturgeon				Bridge replacement
22097	3460-4	Fremont West		X, river otter, interior least tern, piping plover				Overlay
22173	STPAA-5027(1)	**77th St. in Ralston**	X					
22191	77-49	Platte River Trail Phase 1		X, pallid sturgeon, piping plover, interior least tern, western prairie fringed orchid				Trail

CN	Project No	Project Name	No effect to all species per matrix, used the SEP form, FHWA approval only (put x in box if true)	IPLE or MEMO used to document Matrix didn't fit (put x in box if true and note spp)	NLAA CC per matrix, agencies concurred (name spp with NLAA CC)	MA per matrix, consulted with agencies (name spp with NLAA CC)	IBA was written for the project	Brief phrase description of scope
22202	5001-15	144th st West Dodge to Eagle Run in Omaha	X					Road widening
22220	STPB-89(24)	**Blair Dana Trail**	**X**					
22236	5011-8	144th - Pierce Pl to Burke St		X, river otter				Street reconstruction
22258	3806-1	Bennington SE		X, river otter				Street widening
22265	773-128	Fremont South Bridge		X, interior least tern, piping plover, pallid sturgeon, lake sturgeon, sturgeon chub, massasauga, river otter, american ginseng				Bridge replacement
22270	77-53	Rumsey Station SRTS		X, river otter				Crosswalks, curb extensions, signs
22277	5009-3	120th St, Stonegate to Roanoke		X, river otter				Lane upgrades
22278	5114-6	Intersect Sorensen Parkwy & N Freeway	X					Turn lane
22279	5057-9	42nd & Q Brdg & Intersec	X					Bridge replacement
22290	5023-14	Washington St Reconstr		X, river otter				Street reconstruction
22308	ENH-28(91)	**Omaha Old Market Street Rehabilitation and Renovation**	**X**					
22309	77-55	Papillion Midland Creek Trail		X, river otter				Trail
22310	77-56	Springfield Trl - Phase III		X, river otter				Trail
22312	URB-6403(2)	**15th St.- Ave A to Ave C**	**X**					
22314	URB-6403(3)	**15th St.-1st Ave. to Main**	**X**					
22325	5026-11	Q St Bridge, 26th - 27th	X					Bridge replace
328	307-116	Blair East	X					
336	1332-112	Inters N-133 & N-64	X					Intersection
22353	5103-14	10th St. Brdg Widen		X, river otter, pallid sturgeon, lake sturgeon, sturgeon chub				Bridge widening
22355	89-26	Blair Depot in the Park	X					Restoration of existing train depot, extension of bike trail
22356	5039-1	66th and Maple pedestrian nodes	X					Pedestrian nodes
22358	URB-75-3(115)	**Hwy 75 Improvements**		X, pallid sturgeon, lake sturgeon, sturgeon chub				Trail, lane reconstruction
22363	5086-1	Intersection of 58th Street and Northwest Radial Highway	X					Reconfigure intersection, close road, install traffic signals, pavement removal, minor grading, curb and gutter.
22368	917-108	US-275 East		X, interior least tern, piping plover, lake sturgeon, pallid sturgeon, sturgeon chub				Resurface, guardrail, grading, trench widening
22371	5089-1	Inters F/16th & Spring Lake Dr	X					Roundabout
22372	5015-1	102nd & Maple, Omaha	X					Safety improvements to intersection
22378	5011-12	108th, from L to M, Omaha	X					Intersection
22379	5097-1	Traf Signals 15th & Farnam	X					Traffic signals
22380	5049-3	52nd & NW Radial	X					Traffic signals, medians, curb ramps
22381	5057-11	Traf Sigs 42nd & Dodge	X					Traffic signals
383	5121-2	Traf Sigs 13th & Harney	X					Traffic signals
386	MAPA-5145(1)	**Major Street resurfacing**	**X**					
22387	MAPA-5109(7)	**Harvel and Galvin Signal**	**X**					

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22388	MAPA-5006(5)	**Ft. Crook and Harvell Sig.**	X					
22390	MAPA-5106(1)	**ADA Ramps**		X, lake sturgeon, pallid sturgeon, sturgeon chub, interior least tern, piping plover, river otter				ADA ramps
22391	MAPA-5106(2)	**Major Street resurfacing**		X, lake sturgeon, pallid sturgeon, sturgeon chub, interior least tern, piping plover, river otter				Mill, pavement replacement
22392	MAPA-3770(3)	**Platteview Rd. resurfacing**	X					
22393	MAPA-3787(3)	**Laplatte Area Overlay**			X, interior least tern, piping plover			Mill and fill
22396	MAPA-5012(9)	**Giles Rd. rehabilitation**	X					
22397	MAPA-5011(13)	**108th and Chandler**	X					
22399	MAPA-5052(3)	**13th-14th Signals**	X					
22400	MAPA-5097(2)	**15th-16th Signals**	X					
22401	MAPA-5093(1)	**17th-18th Signals**	X					
22408	MAPA-3772(1)	**156th and Giles Rd.**	X					
22415	MAPA-7941(1)	**Major Road resurfacing**			X, interior least tern, piping plover			Resurfacing
416	MAPA-5095(3)	**Major Street resurfacing**	X					
22417	809-32	I-480/I-80/Kennedy Interchange	X					Mill and resurface
22426	502-133	N-50/Giles Rd	X					
22427	27-55	Johnson Rd Trail - Military Ave to 20th St.	X					Trail
22429	5023-16	84th & L, Omaha		X, river otter				Safety improvements to intersection
22435	5091-4	Traf Sigs pkg 4	X					Traffic signals
22436	5089-3	Traf Sigs - pkg 5	X					Traffic signals
22437	5083-6	Traf Sigs - pkg 6		X, river otter				Traffic signals
22438	5003-10	132nd St. Adaptive Traffic Control System	X					Traffic control system
22439	5610-5	Military Ave-Broad to Bell, Fremont	X					Overlay
22441	4809-102	I-480 & US-75 intrchnge	X					Landscaping
22445	5049-4	Omaha Major Street Resurfacing - Pkg. 1	X					Resurfacing
22446	5038-17	Omaha Major Street Resurfacing - Pkg. 2	X					Resurfacing
22449	5001-17	Adapt Traf Contr Syst		X, river otter				Traffic system
22461	752-170	30th&McKinley, Omaha		X, river otter				Safety improvements
22465	809-34	84th St Interchange	X					Resurfacing
22468	3795-5	OA 50 Challenge	X					Asphalt preservation
22475	5099-1	Traf sigs various, Omaha	X					Traffic signals
22478	5017-4	96th, Portal-Harrison		X, river otter				Resurfacing
22482	67-180	Dodge St Traf Contr System		X, river otter				Traffic signals
22484	5109-8	Bellevue Signals		X, river otter				Traffic signals
22501	5046-3	Traf sigs St Marys & Park Ave	X					Traffic signals
31004	230-7	Excess Land Sale					x	Land Sale
31226	3875-2	Craig Northeast	X					Concrete paving
502	7014-31	Hartington SE	X					Bridge
31597	7084-10	Stanton SE		X, river otter				Bridge
31702	7019-10	Richland NW		X, massasauga, river otter				Bridge replacement

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31723	3130-5	Concord East	X					Asphalt overlay
31777	90(4)	Wayne Trail Phase II	X					Concrete and crushed limestone trail
31784	354-120	E Jct N-9 to Dakota City	X					Resurface
31786	206-108	Laurel Northeast	X					Bridge replacement
31788	814-115	West Bow and Norwegian Bow Bridges	X					Bridge replacement
31826	143-114	Albion to Petersburg		X, ABB, river otter, whooping crane				Mill
31848	STPB-87(10)	Winnebago Thunder Way Trail	X					
31875	6001-1	Norfok 25th St widening		X, topeka shiner, river otter				Road reconstruction
31887	326-111	Union Crk to N-57	X					Resurfacing
31890	705-104	Elgin West		beetle				Resurfacing
31894	153-113	N-32 - Pilger	X					Resurfacing
31897	453-110	In Tilden and Battle Creek North		X, topeka shiner				Resurfacing, trench widening
31903	754-109	Winnebago to Homer	X					Resurfacing
31909	ENH-71(30)	Platte County Monastery Trail	X, old consultation process (directly with agencies). NE					
31914	326-112	N-57 East	X					Resurfacing
31924	6065-2	Columbus projects		X, interior least tern, piping plover, pallid sturgeon, lake sturgeon, sturgeon chub				Viaducts
31975	ENH-54(15)	Gavin's Point Nebraska Meridian Trail- Phase 1		X,, Pallid Sturgeon, Lake Sturgeon, Sturgeon Chub, Scaleshell Mussel				
31977	14-3	Laurel Safe Routes to School	X					Installation of concrete sidewalk and AADA curbs and ramps, replacement of pedestrian bridge
31995	754-110	Jct. US-75 and US-77/N-35	X					Rework intersection
32011	3100-1	Winside East	X					Bridge
32071	URB-6954(1)	9th St.-B to G St.	X					
32072	URB-5305(8)	Dakota Ave. Lighting	X					
32073	URB-5305(9)	ITS Signal integration	X					
32076	70-20	Pierce Safe Routes to School	X					Sidewalk, cross walk signals
32081	5305-10	Dakota Ave		X, Pallid Sturgeon, Lake Sturgeon, Sturgeon Cub				
32084	ENH-22(29)	Dakota City Depot - Interior Renovation		X, memo, Pallid Sturgeon, Lake Sturgeon, Sturgeon Cub				
32089	ENH-54(18)	Gavin's Point Nebraska Meridian Trail - Phase 2		X, Pallid Sturgeon, Lake Sturgeon, Sturgeon Chub, Scaleshell Mussel				
32090	3-101	Distr 3 High Mast Twr	X					
32109	306-136	US-30 NE of Schuyler	X					Crossover lanes
32113	915-123	Jct N-91 and US-81	X					
32117	814-119	Jct Us-20 - Jct N-59	X					Resurfacing
32140	754-111	Macy to Winnebago	X					Resurfacing
32063	246-102	Norfolk - Stanton		X, whooping crane				
41015	STPAA-6305(1)	Nebraska Ave. Storm	X, old consultation process (directly with agencies). NE					
41634	7093(23)	Bradshaw Southeast	X					
716	BRO-7065(21)	Oak South	X					

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42032	112-114	Wood River West	x					ROW, grading, culverts, viaduct, surface 24' roadway
42059	BRO-7063(6)	**Fullerton SW**	x					
42226	7030-30	Geneva Northwest		X, whooping crane				Bridge
42402	L41D-101	Hampton Link	X					Resurfacing, guardrail
42405	305-130	Chapman-Central City	X					Resurfacing
42415	807-151	Phillips - Giltner	X					Resurfacing
42416	807-152	Aurora East & West	X					
42443	2811-114	In Blue Hill & South	X					3R
42445	2038-1	Hastings Northeast		X, river otter, crane				Box culvert
42460	2065-4	In Ashton		X, river otter				Bridge
42469	141-118	In Nelson and South	X					
42482	S40D-105	Prosser Spur			X, interior least tern, piping plover, river otter, whooping crane			New bridges
42511	806-103	Gibbon - Shelton	X					Resurfacing
42512	806-104	Shelton to Wood River	X					Resurfacing
42516	808-144	Waco to Utica		X, whooping crane				Mill and overlay
42521	40-57	Walk to Walnut SRTS	X					New driveway
42536	392-106	Genoa South	X					Resurfacing, guardrail, etc.
42571	304-155	Buffalo/Dawson County Line East			X, river otter, whooping crane			Resurfacing
42579	65-113	Grafton West	X					Resurfacing, culverts
42580	102-119	25th - 31st, Kearney	X					Reconstruct urban concrete pavement, curb and gutter
2585	304-156	5th Ave, Kearney	X					Replace 5th ave. traffic signals. ADA - curb ramps.
42595	112-118	Jct N-92 North	X					Resurfacing
42596	345-115	Phillips East	X					Resurfacing
42597	924-109	W Jct N-58 East	X					Resurfacing
42601	102-120	East Jct US-30 South	X					Resurfacing
42603	924-111	St. Paul West	X					Overlay
42630	807-158	Giltner E & W		X, river otter				Resurfacing, guardrail
42631	5516-8	Resurf Hastings - mult. Locates	X					Resurfacing
42633	URB-5922(3)	**39th St.-Pony Ex. To Ave.M**	X					
42634	URB-5514(3)	**9th St.-Burlington to Balt.**	X					
42635	URB-5512(8)	**7th St.-Baltimore to Osweg**	X					
42636	URB-5505(3)	**Baltimore Ave.-2nd to 12th**	X					
42637	URB-5527(1)	**Showboat Rd. 7th to 12th**	X					
42650	40-59	State St & Cap Ave Connect Trail	X					New trial
42652	807-159	York Interchange Bridges	X					Bridge work
42653	805-70	Kearney E viad removal		X, river otter, whooping crane, interior least tern, piping plover				
42663	85-109	Rose Creek Bridge	X					Bridge repair
42667	806-109	WoodRiver - Grand Island	X					Crack seal
42668	806-110	Platte Rvr to Phillips	X					Crack seal
42689	808-151	Waco Interchange	X					Lighting
42696	6312-2	19th Street, Blackburn-Delaware, York	X					Road reconstruction
51182	21-117	Hemingford - Berea	X					
51187	3854-130	Box Butte/Dawes Counties North	X					
.189	STPE-1035(6)	**Harrisburg Northwest**			X, mountain plover			Full depth replacement
51216	261-153	Morril West		X, river otter, swift fox				Add turn lane, resurface, culvet extensions
51290	201-137	Harrison West	X					Mill and resurface

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51303	STPE-1135(2)	**Sidney South**			X, mountain plover			Overlay, earth shoulders
51309	801-171	Bushnell to W Kimball	X					Resurfacing
51315	STPE-1132(1)	**Sidney South**			X, mountain plover			Road reconstruction
51326	17-24	Sidney Deadwood Trail		X, swift fox				Trail
51335	713-126	N-88 Jct North & South	X					Resurfacing
51349	URB-5709(3)	**Ave. "B" in Scottsbluff**	**X**					
51361	294-107	Agate South		X, crane				
51378	URB-5724(2)	**Rundell Rd. "D" St**	X					Road reconstruction
51397	3854-133	Chadron North	X					Mill fill and guardrail
51413	5-101	Dist 5 High Mast Towers					X	Towers
51450	6255-3	18th St. - 25th St.	X					Street improvement and repair
51454	5720-1	27th St, Ave I - Hwy 26, Scottsbluff	X					Resurfacing
60938	23-117	Merna-Broken Bow		X, american burying beetle				Resurfacing
60939	302-133	Big Springs-Brule		X, interior least tern, piping plover				
61009	22-113	Seneca East and West		X, american burying beetle, crane				Mill and resurface providing a 30 foot top
61200	23-118	In Broken Bow	X					Resurfacing
61232	1833-115	Sargent North				X, ABB (NLAA CC), whooping crane (NLAA CC)		Fill and resurface
61252	STPE-1755(13)	**Halsey North**			X, ABB			Surfacing, patching, joint seal
61368	261-158	Lewellen South			X, interior least tern, piping plover, river otter, swift fox, whooping crane, bald eagle			
61414	1480-11	Maxwell Southwest			X, american burying beetle, finescale dace, northern redbelly dace, river otter, swift fox, whooping crane			Bridge replacement
61424	804-136	OA project			X, american burying beetle, finescale dace, northern redbelly dace, interior least tern, piping plover, river otter, swift fox, whooping crane			
61433	2832-102	Ash St. to Jefferson St, Lexington	X					
61460	303-115	Overton East			X, whooping crane, river otter			
61461	302-138	Paxton to Sutherland			X, whooping crane	X, ABB(NE), interior least tern(NE), piping plover(NE), Swift fox(NLAA CC),		Resurfacing
61466	832-134	Wellfleet North			X, swift fox whooping crane			Resurfacing
61489	6561-2	Jackson St Improvements	X					Road reconstruction
61510	832-138	North Platte North			X, swift fox, whooping crane			Resurfacing
61511	252-108	Sutherland South			X, interior least tern, piping plover, swift fox, whooping crane			Resurfacing

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61531	805-74	Lexington - Overton			X, whooping crane, interior least tern, piping plover			Crack sealing
61537	6558-1	17th & Walnut, Lexington	X					Concrete replacement, ADA ramps, curb and gutter
61540	974-111	Brownlee Road South			X, whooping crane			Armor coating
61541	613-110	Arthur-Grant Co Line			X, whooping crane			Armor coating
70565	461-102	Oxford South Bridge				X, whooping crane(NLAA CC)		Bridge replacement
70696	342-124	Benkelman South				X, swift fox(NLAA CC)		Road rehabilitation, bridge replacement
70788	STPE-1525(4)	**McCook West**			X, whooping crane			Overlay
70877	1530-5	Elwood Southwest				X, ABB(NE), river otter(NE), swift fox(NLAA CC)		Bridge replacement, grading
71028	64-124	Minden E and S	X					Resurfacing
71029	BRO-7069(15)	**Funk Northwest**	X					Replace bridge with a box culvert
71105	342-121	US-6 West			X, whooping crane, swift fox			Resurfacing
71121	64-127	Jct. US-6/N-44	X					Turn lane improvement
71137	1831-115	Alma North & South			X, whooping crane			Resurfacing
71144	63-125	Jct N-46 - Holdrege			X, whooping crane			Crack sealing
80605	STPE-1710(4)	**Springview NW**	X					Surfacing, patching, joint seal
80720	STPE-1810(4)	**Bassett South**	X					Surfacing, patching, joint seal
80721	STPE-1810(5)	**Bassett SouthEast**	X					Surfacing, patching, joint seal
80727	202-131	Nenzel West			X, American burying beetle			Resurfacing
80800	834-112	Valentine North			X, blacknose shiner, finescale dace, northern redbelly dace, river otter, whooping crane	X, ABB(NLAA CC), Topeka Shiner(NE)		Resurfacing, guardrails, culverts
80801	1834-111	Rose - Bassett			X, whooping crane, american burying beetle, western prairie fringed orchid, small white ladys slipper			Resurfacing
80802	1834-112	Rose North			X, whooping crane, american burying beetle, western prairie fringed orchid, small white ladys slipper			Resurfacing
80847	2814-117	Spencer North			X, american burying beetle, whooping crane			Mill and resurface
80861	202-136	Sheridan Co Line East			X, whooping crane, swift fox			Resurfacing
80878	202-133	Crookston West			X, american burying beetle, whooping crane			mill and fill
80881	834-114	S16B North & South			X, whooping crane			Resurfacing
80895	834-115	North Loup Rvr North			X, whooping crane, swift fox			Resurfacing
80896	202-137	Kilgore East			X, whooping crane			Resurfacing
80897	204-123	Inman East & West			X, whooping crane			Resurfacing
0901	202-138	Crookston - Valentine			X, whooping crane			Resurfacing
00592D	ITSN-114	DMS Rehabilitation			X, interior least tern, piping plover, whooping crane			Sign rehabilitation

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00649J	ITSN-209	D2-D1 Device Deployment					X, NE	Camera Installation
11450A	632-114	Alvo North Bridge		X, river otter				Bridge replace
12888A	808-143	I-80 Goehner Truck Parking	X					Parking area
20137C	STPC-38-7(106)	W Center-148th to US 275		X, river otter, pallid sturgeon, lake sturgeon, sturgeon chub				Lane expansion
21791A	1333-103	Blair South	X					Lane reconstruction
22272A	27-60	Fremont Main St Hist Lighting	X					Lighting
22498, etc	5001-18, etc	Omaha Concrete Repair pkgs.		X, river otter				Concrete repair
31442, 31416A, 31416B	353-105, 353-107, 353-108	Norfolk SE, In Norfolk Norfolk NE		X, river otter, small white lady's slipper, topeka shiner, western prairie fringed orchid, whooping crane				Lane reconstruction
31490A	453-109	Newman Grove North Bridges		X, whooping crane, river otter, topeka shiner				Bridge replace
31519A	915-120	Lindsay East Bridge		X, river otter, pallid sturgeon, lake sturgeon, sturgeon chub, small white lady's slipper, western prairie fringed orchid				Bridge replace
31941A	813-139	Norfolk South			X, interior least tern, piping plover			Resurface
)81 and A	5305-10, -11	Dakota Ave resurv; Regency Prkwy		X, pallid sturgeon, lake sturgeon, sturgeon chub				Overlay and reconstruct pavement
61425, 61426	804-137 & -138	Gothenburg E & W, Cozad - Darr			X, American burying beetle, Interior least tern, piping plover, river otter, whooping crane	X, whooping crane		Resurface, guardrail, earth shoulders
61449 & 61449A	832-139 & 832-140	North Platte		X, Interior Least Tern, Piping Plover, River Otter				Curb ramps, resurface
70476A	44-103	Campbell West		X, whooping crane				Resurface, bridge replace

Records from the pilot phase were reviewed to see if patterns of concentrated effects to certain species could be identified. Patterns can be used as an indicator of potential cumulative or direct Program affects. The 307 projects were reviewed for impacts to the 31 state and/or federally listed species and critical habitats in Nebraska, for a total of 9517 individual species/critical habitat impact assessments (307 projects x 31 species/critical habitat). Upon review of the pilot data, well over 50 percent of projects led to a "No Effect" determination for all species/critical habitat. Less than 5 percent of projects led to a "May Affect" determination for a species/critical habitat and required individual consultation. Notably, no formal consultations were required during the pilot. This indicates that the tools created are comprehensive enough to identify and address most transportation related species impacts. In addition, since the transportation program in Nebraska is heavily focused on asset management (maintaining existing facilities), the overall federal-aid transportation program has a low impact to listed species/critical habitat.

The implementation of the PA, the general conservation conditions, and the general conditions that apply within certain species ranges allow avoidance and minimization of species impacts on a program level. Based on the findings of the pilot phase review, the implementation of the Process has not created cumulative or direct impact concerns at a program level.

5.2 Species Level Impact Evaluation of Process Implementation

The information below describes the Program's impact to Nebraska E&T species by grouping like species into one assessment. Species groupings are aquatic species, plants, mammals, reptiles, birds and insects.

AQUATIC SPECIES (Fish and Mussel) - Implementation of the conservation conditions and NDOR policies makes the risk of impacts to species, habitat or water quality negligible and/or discountable. Degradation of water quality through roadway runoff or construction-related sedimentation/erosion is a concern with transportation projects. In addition, bridge and culvert construction/reconstruction efforts may affect aquatic species through impeding movement or altering stream flow. However, through the application of Clean Water Act Section 404 and 401 permitting requirements and implementation of SWPPP requirements, these types of effects to aquatic species are avoided, the residual level of impact being so slight that it cannot be measured.

When advancing through the Process, actions with a greater potential to impact aquatic species, such as channelization activities, bank stabilization, and work within channels, are assigned "May Affect" determinations and are addressed through a project-specific consultation with the resource agencies.

Data from the pilot process showed that a small percentage of the transportation projects reviewed during that 1.5 year effort either occurred within suitable habitat or created actions that would potentially affect aquatic species. For example, due to the broadly defined habitat needs for the pallid sturgeon, several projects required IPLEs to be written to justify that the action would not affect the species. Many of these actions occurred within heavily urbanized areas. Therefore, based on a review of the pilot, cumulative effects to aquatic species were not identified. During the annual random sample review process, the potential for cumulative effects will continue to be identified and addressed if found.

In summary, the implementation of this program may affect, but is not likely to adversely affect listed aquatic species in Nebraska.

PLANTS - The primary concerns for plant species are direct impact to individuals and indirect modification of suitable habitat during construction. Indirect impacts may include land use changes, ground disturbances, soil contamination, or hydrologic changes. NDOR policies and state laws ensure that hydrologic studies occur during the design process and hydrologic changes are avoided. In addition, general conservation conditions are implemented through the Process and SWPPP requirements to avoid soil contamination. Also, direct impacts to listed plants are avoided because the matrix conservation conditions require that a survey be conducted when ground disturbance occurs within suitable habitat. If survey results are positive, then consultation is required. Surveying, documenting presence/absence, and consultation when the species is found makes the risk of impacts to individuals negligible.

Data from the pilot process showed that only a handful of the transportation projects that would have potential to impact listed plants occurred within suitable habitat. Many of the transportation projects during the pilot either occurred within heavily urbanized areas, or were predominantly asset preservation type projects, where the potential for suitable habitat disturbance was minor. In addition, for the few projects during the pilot that required plant surveys, no listed plants were found. Had plants been found, consultation with the resource agencies would have occurred. Therefore, based on a review of the pilot process, direct impacts, indirect impacts and cumulative effects to plants were not identified. During the annual random sample review process, the potential for cumulative effects will continue to be identified and addressed if found.

In summary, the implementation of this program may affect, but is not likely to adversely affect the listed plant species in Nebraska.

MAMMALS - Implementation of the conservation conditions and NDOR policies reduces the risk of impacts to species, habitat or water quality. The primary concern for mammals is direct impact to individuals through mortality, or impacts to breeding, feeding and sheltering. Indirect impact concerns may include modification of suitable habitat during construction through land use changes, impeding movements, modification of behavior, and hydrologic changes. NDOR policies and state laws ensure that hydrologic studies occur during the design process and hydrologic changes are avoided. Also, direct impacts to listed mammals (other than ferrets and wolves) are avoided because the matrix conservation conditions require survey to be conducted when ground disturbance occurs within suitable habitat. If survey results are positive, then further consultation is required. Surveying, documenting presence/absence, and consultation when the species is found makes the risk of impacts to individuals negligible.

When advancing through the Process, actions with a greater potential to impact mammals, such as channelization activities, grading below the hinge point, and activities that create barriers to movement, are assigned "May Affect" determinations, and are addressed through a project-specific consultation with the resource agencies.

The black-footed ferret and gray wolf have no known permanently occupied or seasonally occupied habitats in Nebraska. However, the program assumes that black-footed ferrets exist within the state. Adverse program effects to black-footed ferret are not anticipated because consultation is required if project activities occur in an area of suitable habitat (large prairie dog complex). The main concern for the black-footed ferret is the destruction or fragmentation of potential reintroduction sites. Adverse program effects to gray wolf are not anticipated due to the extensive home range and transient nature of this species. Due to the linear nature of transportation projects, the main concern for adverse affects to the gray wolf is habitat fragmentation caused by new roadway corridors or the widening of existing roadways within the gray wolf range. Any transportation actions that could lead to habitat fragmentation have been designated as a "May Affect" determination activity, requiring consultation.

When reviewing the data from the pilot process, a higher than expected proportion of projects created at least an NLAA CC determination for river otter. The river otter suitable habitat question focuses on actions occurring within 0.5 miles of certain water bodies, and a large percentage of transportation projects have fallen within that parameter. Many of the transportation projects evaluated during the pilot process either occurred within heavily urbanized areas or were predominantly asset preservation projects where the potential for suitable habitat disturbance was minor, but still within suitable river otter habitat. Therefore, even though the frequency of river otter assessments through the process was fairly high, the actual impacts to river otter were low.

Based on a review of the pilot program direct impacts, indirect impacts and cumulative effects to mammals were not identified. During the annual random sample review process, the potential for cumulative effects will continue to be identified and addressed if found.

In summary, the implementation of this program may affect, but is not likely to adversely affect listed mammal species in Nebraska.

REPTILES (Massasauga) - Implementation of the species-specific conservation conditions reduces the risk of impacts to species and their habitat. The primary concern for massasauga is direct impact to individuals through mortality, or impacts to breeding, feeding and sheltering areas. Indirect impact concerns may include modification of suitable habitat during construction through land use changes, changes in hydrology, and impeding seasonal movement. Direct impacts to massasauga are avoided because the matrix conservation conditions require that a survey be conducted when ground disturbance occurs within suitable habitat. If survey results are positive then further consultation is required. Also, projects within suitable massasauga habitat include additional conditions to modify erosion control strategies, and requirements for construction personnel to avoid harming snakes. Surveying for these species, requiring avoidance of snakes, and modifying erosion control practices reduce the risk of impacts to individual snakes.

When advancing through the Process, actions with a greater potential to impact massasauga such as activities that fragment habitat or directly take species are assigned a "May Affect" determination and are addressed through project-specific consultation with the resource agencies.

Data from the pilot process showed that a small percent of the transportation projects occurred within suitable habitat. Therefore, based on a review of the pilot process, cumulative effects to massasauga were not identified. During the annual random sample review process, the potential for cumulative effects will continue to be identified and addressed if found.

In summary, the implementation of this program may affect, but is not likely to adversely affect the massasauga in Nebraska.

BIRDS - Implementation of the conservation conditions and NDOR Policies makes the risk of impacts to listed bird species, habitat or water quality negligible and/or discountable. Most of the listed bird species in Nebraska are closely tied to aquatic systems. Degradation of water quality through roadway runoff, construction-related sedimentation/erosion, and changes in flow regimes are concerns for transportation projects where listed birds occur. However, through the application of Clean Water Act Section 404 and 401 permitting requirements, and implementation of SWPPP requirements, effects to listed bird species are avoided, with the residual level of impact so low it cannot be measured.

When advancing through the Process, actions with a greater potential to impact bird species, such as channelization activities, grading activities, bank stabilization, habitat fragmentation and work within channels, are assigned "May Affect" determinations and are addressed through a project-specific consultation with the resource agencies. For most other activities, the conservation conditions either allow avoidance of nesting or migration seasons, or follow survey protocols to determine if the species is present within the project area. If the species is present, consultation occurs and any activities with potential to disturb the species are halted until consultation is complete.

Data from the pilot process showed that interior least terns, piping plovers, and whooping cranes were identified frequently for potential impacts because many roadways are close to or cross waterways. In addition, whooping cranes were identified frequently due to the large size of their migration corridor. Because conservation conditions focus on avoidance of species, the potential for impacts on these types of projects is negligible. Since a main avoidance strategy involves following survey protocols prior to construction, survey protocol methodology was reviewed to determine if repetitive implementation of the protocol could impact these species. Because these surveys focus on visual searches for species, the potential to habituate birds to call surveys is non-existent. There is a slight potential for the visual presence of a person to flush a listed bird. However, requiring survey personnel to minimize visual and noise disturbance reduces this concern. Therefore, based on a review of the pilot program, cumulative effects to these bird species from implementation of the Process were determined to be insignificant. During the annual review process, the potential for cumulative effects will continue to be identified and addressed.

The last confirmed sighting for the Eskimo curlew in Nebraska occurred prior to 1975 and no known permanent or seasonally occupied habitats exist within the state. During the pilot program, no project activities were identified that had potential to impact the species. If new information becomes available regarding this species' status, the Process will be reviewed and modified as necessary.

In summary, the implementation of this program may affect, but is not likely to adversely affect the listed bird species in Nebraska.

INSECTS - The primary concern for listed insect species is direct impact to individuals or the indirect modification of suitable habitat during construction through land use changes, ground disturbances, soil contamination, and hydrologic changes. NDOR policies and state laws ensure that hydrologic studies occur during the design process and that hydrologic changes are avoided. In addition, general conservation conditions are implemented through the Process and SWPPP requirements to avoid soil contamination.

Direct impacts to the American burying beetle are minimized because the matrix conservation conditions require that a survey be conducted when ground disturbance occurs within suitable habitat. If survey results are positive and impacts cannot be avoided, then consultation is required. Surveying, documenting presence/absence, and consultation when needed makes the risk of impacts to individuals negligible. A high percentage of projects occurred within American burying beetle habitat during the pilot program. However, conservation conditions focus on minimizing impacts to species.

For the Salt Creek tiger beetle and designated critical habitat, most project activities result in a "May Affect" determination and require project consultation because their habitats and numbers are limited. Data from the pilot program indicated that none of the transportation projects occurred within actual Salt Creek tiger beetle habitat or its federally designated critical habitat.

Based on a review of the pilot program, direct impacts, indirect impacts or cumulative effects to insects were not identified. During the annual random sample review process, the potential for cumulative effects will continue to be identified and addressed if found.

In summary, the implementation of this program may affect, but is not likely to adversely affect the listed insects in Nebraska.

6. SUMMARY DETERMINATION FOR ALL NEBRASKA E&T SPECIES

Findings of this Programmatic Biological Assessment indicate that implementation of the Programmatic Agreement and use of the Nebraska Biological Evaluation Process may affect, but are not likely to adversely affect the Nebraska federal and state listed endangered and threatened species and their habitats, or federally designated critical habitats.

7. COORDINATION

This Biological Assessment was developed by the following Core Development Team:

For Nebraska Department of Roads:	Eric Zach Zach Cunningham Jason Jurgens Melissa Marinovich Cindy Veys
For Federal Highway Administration:	Melissa Maiefski Raegan Ball Victoria Peters Sue Jennings
For Nebraska Game and Parks Commission:	Michelle Koch Michael Fritz
For US Fish and Wildlife Service	Brooke Stansberry John Cochnar Jeanine Lackey

Additional assistance was provided by other state and federal technical staff.

8. REFERENCES

References regarding Nebraska E&T species are included in Tab 6.

9. SIGNATURES

The following agencies have reviewed this document, and agree with the recommended effect determinations:

For Nebraska Department of Roads

Signature	Printed Name	Title	Date
	Zack Cunningham	Biologist/NDOR	1/6/12

For Federal Highway Administration

Signature	Printed Name	Title	Date
	Melissa Maiefski	Program Delivery Team Lead	1/6/12